

**ABSTRACT**

Embodiments of the present claimed invention utilize video imaging to  
5 analyze the availability of parking spaces. In one embodiment, a computer is  
used to process video images of a parking location to determine if a parking  
space is available. In another embodiment of the present claimed invention, the  
type of parking space is also considered. For example, the system can  
distinguish between a compact parking space and a full-size parking space and  
10 direct vehicles to the appropriate parking space. This distinction becomes  
important when the optimization of space for parking in a crowded area is  
desired. Additionally, wireless communication can be used to deliver information  
regarding vacant parking spaces to motorists. Furthermore, embodiments of the  
present invention incorporate a global positioning system (GPS) to provide  
15 location dependent parking availability to motorists. For example, a motorist can  
request the location of the closest available parking space by pressing a button  
inside the vehicle. In one embodiment, audible directions are provided to guide a  
motorist to the available parking location. In addition to using wireless  
communications to provide parking availability to motorists, the location of an  
20 available parking space can be printed on a ticket and provided to the motorist  
when entering a parking facility or can be displayed on a sign to alert motorists of  
available parking spaces.